of the knee is one of the most troublesome deformities in cases of fracture of both bones of the leg, though the foot may be most accurately adjusted to the foot-piece of the fracture box.

There is one cause of deformity after fracture to which we find no allusion in the pamphlet before us; this is the natural *elasticity* of the surrounding soft parts, without regard to any actual muscular *contraction*. This is well pointed out by M. Anger (in the case of fractures of the clavicle) in his magnificent illustrated work now in course of publication by M. Germer Baillière, of Paris. The clavicle, in the natural state, is *held down* (as it were) by the weight of the arm and the action of the muscles attached to its lower surface (especially the deltoid), and indirectly by those attached to the scapula; now, in case of fracture, most of these forces continue to act upon the acromial portion of the clavicle, while the sternal portion, separated from the rest by the solution of continuity, is tilted upwards by the natural elasticity of its ligamentous attachments, the sterno-cleido-mastoid muscle, etc. That this is correct is shown by the fact that in many cases though the shoulder be elevated, the scapula drawn backwards, and the other usual indications met, yet the deformity will remain, and in such cases can only be overcome by making direct pressure upon the outer end of the sternal fragment.

Dr. Packard follows the majority of writers in stating that after fracture of the clavicle, "pushing, pulling, and lifting are all rendered either impossible or very imperfect until union takes place." In the same view it has been generally stated that a diagnostic mark of this fracture is the impossibility of raising the arm behind the head; but as demonstrated by Velpeau there is no impossibility in the matter, a portion of the trapezius muscle substituting, though imperfectly, the function of the clavicle in steadying the shoulder, and the patient being really able to raise the arm though naturally shrinking from doing so on account of the pain attending the movement.

Dr. Packard's suggestion that fractures of the clavicle may be produced by that bone being bent over the first rib, as a stick is broken by being bent over the knee, has certainly the merit of novelty; we think, however, that its demonstration is as yet a thing of the future.

We have chosen Dr. Packard's remarks on fractured clavicle for comment, as perhaps offering a wider scope for diversity of opinion than other portions of his subject. We have found his remarks on treatment practical and judicious, as might be expected from his known reputation as a surgeon of skill and experience. We commend his well-printed "Notes" to those of our readers who may wish to refresh their recollections upon this most important branch of surgical practice. J. A., Jr.

ART. XXVIII.—*Researches upon "Spurious Vaccination," or the Abnormal Phenomena accompanying and following Vaccination in the Confederate Army during the recent American Civil War.* By JOSEPH JONES, M. D., Professor of Physiology and Pathology in the Medical Department of the University of Nashville, Tenn. 8vo. pp. 134. Nashville, Tenn., 1867.

THESE researches were published originally in the *Nashville Journal of Medicine and Surgery*. They are based upon facts observed among the troops of the "Confederate armies," and lead to conclusions in respect to the cause of the failure of vaccination to protect the system from variolous infection, and the positive disease inflicted upon the system by the employment of certain forms of spurious and contaminated virus, which, though not absolutely new, are of the highest importance in their practical bearing.

Dr. Jones, as the result of his investigations, presents the following prominent causes of the injurious effects of attempts to place the system under the influence of the vaccine infection occasionally met with: 1st. Depression of the vital forces from fatigue, exposure, and poor diet, impoverished, vitiated, and scorbutic condition of the blood of those vaccinated or yielding vaccine matter.

2d. The employment of virus from pustules or ulcers which had occurred in consequence of a deviation from the regular course of development of the vaccine disease; such deviation being due mainly to previous vaccination, and the existence of some eruptive disease at the time of vaccination. 3d. The use of vaccine lymph or crusts in which decomposition had taken place in consequence of the matter having been carried about the person for a long time, and thus subjecting it to the influence of a warm, moist atmosphere. 4th. The mingling of the vaccine virus with that of smallpox. The use of matter taken from those who had been vaccinated while affected with poison of smallpox is capable of producing a modified and comparatively mild form of variola in those inoculated, while by infection it may give rise in the unprotected to an attack of smallpox of the worst character. 5th. The employment of vaccine lymph or crusts taken from those who were labouring under erysipelas during the progress of the vaccine infection, or whose systems were in a depressed condition from improper diet, deficient ventilation, or the exhalations from patients labouring under typhoid fever, erysipelas, hospital gangrene, pyæmia, and ill-conditioned wounds. 6th. From the use of either fresh or dried vaccine lymph or crust taken from patients suffering from syphilis at the time and during the progress of vaccination.

We accede to the general truth of the foregoing conclusions. That, in order to render vaccination a perfect and an enduring protection against the infection of the variolous poison, it is essential to employ perfectly fresh, pure, and effective vaccine matter, and to be sure that when it is inserted into the arm that the patient is entirely free from disease of any kind, we have on more than one occasion endeavoured to prove, and we believe that such is now the opinion of all well informed practitioners. Whether, however, vaccine virus derived from persons who are labouring under certain diseases is capable of communicating the latter to those into whose systems it is introduced in the process of vaccination, is a question still not positively settled. From what has fallen under our own observation bearing directly upon the question, we should be induced to decide it in the affirmative. This much is very certain, that the facts that have recently been elicited in proof of the possibility of communicating other diseases than the vaccine by the use of impure or infected virus, are of too imposing a character not to render every practitioner particularly cautious to employ for vaccination no matter of the purity of which, as well as the entire freedom from disease of the individual from whom it was derived, he has not the fullest assurance. D. F. C.

ART. XXIX.—*Medico-Chirurgical Transactions.* Volume XLIX. (Second Series, Vol. XXXI.) 8vo. pp. lviii., 224. London: Longmans, Green & Co., 1866.

THE present volume of this most valuable collection contains seventeen distinct papers, with five plates and three wood-cuts. In accordance with the usual custom of the *American Journal*, we propose to lay before our readers a brief abstract of these papers. Seven of the seventeen have already been reproduced with more or less detail in the "Quarterly Summary" of preceding numbers of the Journal, so that the remaining ten will alone demand our attention at present.

I. *Observations on the Effect of Coffee on the Urea and Chlorides in Health,* by CHARLES E. SQUAREY, M. R. C. S., etc. Communicated by A. B. GARROD, M. D., F. R. S.—The author's observations were made upon himself and upon two patients. The daily results are carefully tabulated, and the author concludes that the amount of urea excreted is not appreciably diminished by the use of coffee in the doses taken ($\frac{1}{4}$ oz. to 2 oz. three times a day). In two cases no marked change in the amount of chlorides was observed, while in the third case the exhibition of three half-ounce doses produced a decided increase in the